

## SECTOR 2

### SCOTLAND AND ENGLAND—GIN HEAD TO FLAMBOROUGH HEAD

**Plan.**—This sector describes the E coasts of Scotland and England between the S entrance to the Firth of Forth and Flamborough Head. The descriptive sequence is from N to S.

#### General Remarks

**2.1 Tides—Currents.**—Off St. Abbs Head, the S current begins at the time of HW at Dover and the N current begins about 6 hours before HW at Dover. These currents run strongly around the head, off which there is turbulence, especially when strong winds blow against the currents.

Between St. Abbs Head and Berwick, the currents run regularly SE and NW along the coast, with a spring velocity of about 1 knot.

Between Berwick and Flamborough Head, a weak current runs S off the coast. Its velocity is increased by strong and continuous N and NW winds. Winds from the S and SE reduce this current and, if strong and continuous, they may even reverse its direction.

In a position about 7 miles E of Berwick, the S current from off the E coast of Scotland meets the ESE current from the Firth of Forth. The combined current flows SSE in the direction of the coast. Likewise, the NNW current from off the E coast of England divides and runs N off the E coast of Scotland and WNW into the Firth of Forth.

Farther S, between 5 and 10 miles from the coast, the currents begin later and are greater in strength. The spring velocity in each direction is 1.5 to 2 knots.

Off Berwick, the coastal current begins about 45 minutes earlier than the offshore current, 7 miles E. Farther S, this difference increases gradually until it attains a value of 2 to 2 hours 30 minutes off Sunderland. Between Sunderland and Seaham, the coastal current changes rapidly and off the latter place, the coastal and offshore currents begin nearly simultaneously. These conditions continue until near Flamborough Head, where the coastal current is affected by eddies.

**Directions.**—The main coastal route leads in a general SE direction from the entrance to the Firth of Forth and continues through the channel lying between Dogger Bank ( $54^{\circ}40'N.$ ,  $2^{\circ}20'E.$ ) and the mainland.

**Caution.**—Large numbers of fishing vessels may be encountered along this stretch of coast.

Caution, especially in low visibility, is advised in the offshore areas due to the presence of moving drilling rigs.

Numerous wrecks, some dangerous, exist along this coast; they mainly lie within 10 miles of the shore and may best be seen on the chart.

Visibility may be affected along parts of this coast, especially between the River Tyne and the River Tees, by industrial smoke haze.

Numerous areas of spoil ground lie offshore along this coast and may best be seen on the chart.

#### Gin Head to Holy Island

**2.2 Dunbar** ( $56^{\circ}00'N.$ ,  $2^{\circ}31'W.$ ) ([World Port Index No. 31890](#)), a small town, stands prominently at the E end of Tyne Sands, 5.5 miles SE of Gin Head, the S entrance point of the Firth of Forth. The town is mostly built of dark-colored stone, but the church, built of reddish sandstone, is prominent from seaward.

A small harbor, used by fishing boats and pleasure craft, is located at the NW end of the town. It is fronted by dangerous rocks and protected from the N by a breakwater. The entrance faces NW and is cut through the solid rock. The approach channel is marked by perches and indicated by a lighted range. The fairway has depths of 5.6m at HWS and 4.6m at HWN. Vessels up to 50m in length and 4m draft can enter at HWS; however, they must lie aground on a sandy bottom at LW. Vessels waiting for the tide may anchor, in a depth of 13m, about 0.4 mile NW of the harbor entrance.

Belhaven Bay, which fronts Tyne Sands, lies between Whitberry Point and Dunbar, 2.4 miles ESE. Whitberry Point is low and dark with a small conical hill near its center.

Lady Ground, a steep-to shoal patch, has a least depth of 6.1m and lies about 1 mile ENE of Whitberry Point.

Sicar, a detached rock with a depth of 7.9m, lies about 1.5 mile ENE of Dunbar and the sea breaks on it during onshore gales.

**Barns Ness** ( $55^{\circ}59'N.$ ,  $2^{\circ}27'W.$ ), a low point fringed by rocky ledges, is located 2.5 miles ESE of Dunbar. A main light is shown from a conspicuous tower, 37m high, standing on the point.



**Barns Ness Light**

Ruddystone, a rocky shoal with a dangerous wreck lying close SE, is located 0.5 mile N of the light. Vault Ness, a low and wide projection, is located 1.2 miles WNW of the point and has a large house standing on its W side.

Two conspicuous chimneys, 119m high, stand near the coast 0.8 mile SW of Barns Ness. Doon Hill stands about 2.8 miles SW of Barns Ness and is bold and well-defined; it forms the NW end of the high land in that area. A conspicuous pylon, 256m high, stands close N of a mast, about 2.5 miles S of Barns Ness.

Torness Point, fronted by rocky ledges, is located 1.7 miles SE of Barns Ness. A conspicuous white power station building stands close SW of the point.

Pease Bay lies at the mouth of a deep and wooded ravine, 5.2 miles SE of Barns Ness. The ravine is spanned by a stone viaduct, with four unequal arches, which is very conspicuous from seaward.

Cove Harbor, used by fishing boats, is located 0.7 mile NW of Pease Bay. The entrance is 22m wide and within the harbor there is a depth of 3m at HWS. Dunglass Mansion, a conspicuous building, stands within a wood, 0.8 mile W of the harbor.

Fast Castle Head, on which the prominent ruins of a castle stand, is located 8 miles SE of Barns Ness.

During onshore gales, the sea breaks heavily on all of the off-lying rocks and ledges which front this stretch of coast between Dunbar and St. Abbs Head. In addition, as the SE current sets towards it, vessels should give this part of the coast a wide berth.

**2.3 St. Abbs Head** (55°55'N., 2°08'W.), a bold promontory of dark rock, is located 11.2 miles SE of Barns Ness. It rises vertically to a height of 93m and the rock face of the cliff is broken into deep fissures. The head is separated from Cross Law, about 2 miles W, by a valley which causes it to appear as an island when seen from NW or SE. A main light is shown from a tower with buildings, 9m high, standing on the head. A racon is situated at the light structure.



**St. Abbs Head Light**

The coast S of St. Abbs Head is rugged and bleak. It is backed by high land, which rises boldly, and is mostly bare of trees, with only a few identifiable marks. A small boat harbor, fronted by rocks, is located 1.2 miles S of the head; the entrance faces N and is 6m wide.

**Anchorage.**—During offshore winds, anchorage can be temporarily obtained by small vessels in Scoughall Roads. The roadstead has depths of 9 to 11m, clay, and lies about 0.5 mile offshore, 3 miles NW of Dunbar.

**Caution.**—An outfall pipeline, which may best be seen on the chart, extends 1.3 miles N from a point on the shore located 1.2 miles WSW of Dunbar. Its seaward end is marked by a buoy.

A measured distance, marked by beacons, is situated close WNW of St. Abbs Head and may best be seen on the chart. It is reported (1999) that the beacons are difficult to distinguish from beyond 2 miles offshore and are no longer maintained.

**2.4 Eyemouth** (55°52'N., 2°05'W.) ([World Port Index No. 31880](#)) stands on low ground at the S end of a shallow bay, 3 miles SSE of St. Abbs Head. It is situated at the W side of the mouth of the River Eye and backed by hills, 75m high.

The harbor, which is used by a small fishing fleet, lies at the entrance to the river and is fronted by rocks. The entrance, which faces NW, lies between two breakwaters and is approached through a channel, 300m long and about 18m wide, indicated by a lighted range. The harbor, within which a depth of 0.9m is maintained, has depths of 6.1m at HWS and 4.6m at HWN. Small vessels with drafts up to about 4.6m draft can enter at HW. Local knowledge is recommended.

The coast S of Eyemouth is low, but it rises to a height of about 90m close N of Burnmouth.

**Burnmouth** (55°50'N., 2°04'W.), a small village, is situated at the mouth of a deep ravine, 2 miles SSE of Eyemouth. Dangerous rocks front the mouth and lie up to 0.6 mile offshore. The small harbor, which dries, is formed by a pier at the inner end of an opening in the rocks. It is used by fishing boats with local knowledge. The approach channel is indicated by a lighted range.

A prominent television mast stands about 0.7 mile WSW of the harbor.

Between Burnmouth and Berwick, 5 miles SSE, the coast consists of steep banks and cliffs up to 19m high, which gradually decrease in height towards the S. Rocks fringe the shore and extend up to 0.4 mile offshore. Lamberton Hill, 215m high, and Halidon Hill, 162m high, back this part of the coast and stand 3 miles S and 5 miles SSE, respectively, of Eyemouth.

The border between England and Scotland is located about midway between Burnmouth and Berwick.

**2.5 Berwick** (Berwick-Upon-Tweed) (55°46'N., 2°00'W.) ([World Port Index No. 31860](#)) stands on the side of a hill which slopes down to the N side of the mouth of the River Tweed. The small towns of Spittal and Tweedmouth stand on the low ground at the S side of the river entrance.

**Tides—Currents.**—Tides rise about 4.7m at springs and 3.8m at neaps.

At a position about 1.5 miles E of the breakwater, the SE tidal current begins 10 minutes after HW at Dover and attains a spring velocity of about 0.8 knot. The NW current begins about 6 hours before HW at Dover and attains a velocity of about 1 knot. Within the river, the currents are fairly strong. Freshets may increase both the duration and the velocity of the outgoing current and reduce the incoming current correspondingly.

**Depths—Limitations.**—The harbor, which is mostly used by coasters, consists of a tidal dock basin and a jetty, which are situated on the S side of the river. The entrance fairway over the bar is about 54m wide and has a depth of 0.6m.

Ledges and foul ground extend up to 0.4 mile from the coast, N of the breakwater. Spittal Hirst, a shoal with a depth of 10.1m, lies about 4.5 miles E of the river entrance. Vessels approaching from the S should pass E of it.

The jetty, used for loading stone, has a depth of 2m alongside at MLWS. It can handle vessels up to 75m in length and 4.6m draft at HW.

The dock basin provides 457m of quayside and has extensive facilities for bulk cargo. It has depths of 6.4m at HWS and 4.9m at HWN. Vessels up to 4,000 dwt, 115m in length, and 16.5m beam can be accommodated with drafts up to 4.6m at springs and 3.9m at neaps. Vessels not fitted with a bow thruster are limited to a length of 68m.

**Aspect.**—The harbor, located at the mouth of the river, is entered between a breakwater projecting from the N entrance point and a low, sandy spit extending from the S entrance point. This spit acts as a natural breakwater. A bar, composed of sand and rocky boulders, lies between the spit and the head of the breakwater.

The town hall, with a spire, and two churches stand on high ground at the N side and are conspicuous. A prominent chimney stands on the S side of the entrance. A light is shown from a prominent tower, 13m high, standing on the head of the breakwater. The channel within the harbor, which is about 100m wide, is marked by buoys and beacons and is indicated by lighted ranges.

**Pilotage.**—Pilotage is compulsory for all commercial vessels over 40m in length. Vessels should send an ETA to the harbor office at least 1 hour in advance. Large vessels should confirm their length, beam, and draft prior to arrival. Pilots can be contacted by VHF and board up to about 1 mile E of the breakwater, weather permitting.

**Anchorage.**—Good anchorage may be found, in depths of 13 to 15m, about 0.8 mile ESE of the breakwater head, but it is exposed to N and E winds. During strong E winds, it may be possible to enter Holy Island Harbor when Berwick is closed. During strong W winds, anchorage in Berwick Bay, with its better holding ground, is preferred.

**Caution.**—During the period of the outgoing current, particularly with freshets, entering or leaving the harbor is considered dangerous.

It is reported that equally bright lights in the vicinity of the town may be mistaken for the navigation light at the head of the breakwater.

Considerable shoaling may take place in the vicinity of the sands at the mouth of the river and at the entrance to the wet dock, especially after W gales. Due to these frequent changes, local knowledge is essential.

**2.6 Berwick Bay** (55°45'N., 1°55'W.) lies between the entrance to the River Tweed and the N end of Holy Island, 6.5 miles SE. It is the beginning of the most dangerous section of the E coast of England, N of the River Humber. For about 0.6 mile SSE of the entrance to the River Tweed, a sandy beach fringes the coast. Then for about 2.7 miles to Cheswick, it is fringed by a rocky ledge, the central part of which is backed by cliffs, 31m high. Then, a low beach fronts the shore and gradually extends seaward to where, at LW, it connects Holy Island to the mainland and forms an extensive area of sand flats. In the S part of the bay, several shoals lie up to 3 miles from the coast.

A conspicuous silo tower stands near the coast at Goswick, 4.8 miles SE of Berwick.

**Directions.**—The coastal route leads about 14 miles SE from a position located ENE of Berwick to a position E of Longstone. It then continues for about 4 miles SSE to a position E of North Sunderland.

## Holy Island to the Snook

**2.7 Holy Island** (55°41'N., 1°47'W.), moderately elevated, slopes to the SW and has scarcely a tree or shrub on it. The main body of the island is based on limestone rock which extends about 400m seaward on the N, E, and S sides. Extensive tracts of drying sand extend from the W and S sides of the island. A low and narrow ridge of sand hills extends W from the main body of the island and terminate at Snook Point. A causeway crosses the tract of sand, about 0.8 mile wide, between Snook Point and Beal Point on the mainland. A tower and a flagstaff stand about 0.4 mile E of Snook Point.

Emanuel Head, the NE extremity of Holy Island, is formed by a cliff, 3m high, on which stands a conspicuous stone beacon, 15m high. Castle Point, the SE extremity of the island, is low and fronted by rocks.

Holy Island Harbour, secure and well-sheltered, is situated at the S side of the island. It is very small, but appears large at HW. The entrance lies between Castle Point and Old Law, a narrow islet 0.8 mile SW. The harbor can sometimes be entered during E winds, when Berwick is closed. It is mostly used by fishing vessels, especially during the herring season, which lasts from June to September. There are no alongside berths except for a jetty which is used to land fish. Vessels may anchor within the harbor, in depths of 5 to 7m, sand. There are depths of 2.1 to 2.7m over the bar at the entrance; the bottom is chiefly stones covered by kelp with patches of sand. A stony patch, with a depth of 1.8m, lies close S of the entrance fairway, which is indicated by sets of range beacons. Pilots are unavailable.

Holy Island Castle, surmounted by a flagstaff, stands on a hill close WNW of Castle Point and is conspicuous. Heugh Hill, on which a beacon stands, is located 0.5 mile farther W. It is rocky and covered with short grass. A church, with a prominent belfry, stands in the village of Holy Island, close W of this hill.

Goldstone Channel leads between St. Nicholas Rock and Goldstone, on the E side, and Outer Wingate and Plough Seat Reef, on the W side. It has a least depth of 8.2m, but should only be used when the aids are plainly visible as the depths are irregular and the tidal currents strong.

**Black Rocks Point** (55°37'N., 1°33'W.) is located on the mainland 3.7 miles SSE of the SE extremity of Holy Island. A sector light is shown from a building, 9m high, standing on the point and indicates the inner channel.

Bamburgh Castle is situated 0.5 mile SE of the point. It stands on a rock, which rises abruptly from a flat beach, and is conspicuous. The village of Bamburgh, with a prominent church tower, is situated close W of the castle.

**Anchorage.**—Anchorage is available, in a depth of 8m, about 4.5 miles E of Castle Point or in Skate Roads, 1.5 miles E of Holy Island Castle. However, both anchorages are exposed.



Holy Island Castle



Bamburgh Castle

**Caution.**—The E coast of Holy Island is fronted by several dangers through which the approach channel leads.

St. Nicholas Rock, with a depth of 6.1m, lies about 1.7 miles ESE of Emanuel Head; the sea often breaks heavily over this danger.

Goldstone, a rock which dries 1.5m, lies about 2 miles ESE of Emanuel Head and is marked by a buoy. Stiel Reef, with a depth of 5.8m, lies close ESE of Goldstone. Guzzard, a shoal, with a least depth of 4.9m, lies about 0.5m mile SSE of Goldstone and Tree o' the House, another shoal, with a least depth of 8.2m, lies about 0.6 mile farther S.

Outer Wingate, a shoal, with a depth of 3.4m, lies about 1 mile SE of Emanuel Head and the sea generally breaks over it. Minscore, with a depth of 4.3m, is connected to it. An isolated shoal patch, with a depth of 8.2m, lies about 1.5 miles SE of Emanuel Head. Plough Seat Reef, which dries 0.9m, and Wingate, a group of rocks with depths of 1.5m, lie close S of Outer Wingate. Plough Rock, marked by a buoy, lies 1 mile SSE of Emanuel Head.

**2.8 The Farne Islands** (55°38'N., 1°37'W.) are a chain of rocky islands, reefs, and shoals which extend up to 4.3 miles NE of Black Rocks Point. The chain is divided into two groups by Staple Sound. Due to a considerable tidal range, the islands present very different aspects at high and low water.

Staple Sound, which separates the outer group of islands from the inner, is seldom used. It is not marked and the tidal currents attain velocities of up to 4 knots at springs.

Inner Sound, which leads between the islands and the mainland, has a least width of about 0.5 mile and is used as an in-shore route.

The islands are designated as a nature reserve and landing is subject to restrictions. During the breeding season, May through July, many puffins and grey seals may be encountered.

**2.9 The Farne Islands—Outer Group.—Longstone** (55°39'N., 1°36'W.), so called from its shape, is the outermost of the Farne Islands. It appears as one island at LW, but is divided into several parts at HW. A main light is shown from a conspicuous tower, 26m high, standing on the island.



Longstone Light

Knivestone, a rock which dries 3.4m, is located about 0.5 mile NE of Longstone. Whirl Rocks, with a least depth of 0.6m, lie within 0.2 mile N of Knivestone. Northern Hares, 3.7m high, is the northwesternmost islet of the outer group and is located 0.2 mile NW of Longstone, to which it is joined at LW.

Staple Islet, located 0.7 mile SSW of Longstone, is the southwesternmost islet of the outer group. A prominent tower stands on this islet and its S side is formed by a bold cliff. Several detached rocks, known as The Pinnacles, lie close E of the cliff and have the appearance of broken pillars. Another prominent tower stands on Brownsman Islet, 0.2 mile N of Stable Islet.

Crumstone, located 0.9 mile E of Staple Islet, is a flat, black rock. Callers, a reef which dries 2.1m, extends 0.3 mile WNW of Crumstone. Fang, a spit with a depth of 5.2m, projects S from Crumstone.

**Caution.**—Strong tidal currents and numerous eddies exist seaward of Longstone in the vicinity of Knivestone and Whirl Rocks.

**2.10 The Farne Islands—Inner Group.—Farne Island** (55°37'N., 1°39'W.), located 2.2 miles E of Black Rocks Point, is the nearest of the group to the mainland. It is the highest of the inner group and a bold cliff, 8m high, rises on the SW side and gradually slopes NE.

An old tower building, with a house nearby, stands on the NE part of the island. A main light is shown from a con-





**Farne Light**

spicuous tower with a dwelling, 13m high, standing on the SE extremity of the island.

Two islets, with rugged cliffs on their SW sides, lie close E of Farne Island. Bush, located 0.7 mile E of Farne Island, is a rocky ledge which dries in parts. Islestone Shad, lying about 0.7 mile NNE of Farne Island, is a rocky patch, with a depth of 4.3m, over which the sea breaks in bad weather. Glororum Shad, lying about 1 mile N of Farne Island, is a shoal with a depth of 6.1m. Megstone, located 1 mile NW of Farne Island, is a prominent black rock, 5.5m high. Oxcar, a rock which dries, is located 0.5 mile NE of Megstone. Swedman, a drying reef, lies about 0.4 mile W of Megstone and is marked by a buoy.

**Anchorage.**—During S winds, anchorage may be obtained N of Farne Island, but the bottom is rocky and the holding ground is bad. In fair weather, vessels may anchor, in a depth of 16m, about 0.3 mile SE of Farne Island. Vessels may anchor, in an emergency, in a depth of 22m, sand, about 0.2 mile S of Staple Islet.

**Caution.**—It is preferable for all but small coasting vessels to pass outside the Farne Islands. To navigate the Inner Sound with safety requires fine weather and local knowledge. The area lying E of Longstone is a focal point for shipping and depths of 45m to 55m lie within 1 mile of the dangers E of the outer group. Vessels are advised, during poor visibility, to pass at least 3 miles E of Longstone, make due allowance for the tidal current, and remain in depths of 65m or greater.

**2.11 The Snook** (55°35'N., 1°38'W.), also known as North Sunderland Point, is located 3.5 miles SE of Black Rocks Point. It consists of a cliff, 9m high, which has an extensive foreshore of parallel ledges dipping to the S. Grimstone, a detached rock which dries, lies about 0.2 mile E of the point. The Falls, a continuation of the parallel ledges, lies 0.2 mile SSE of Grimstone and is marked by a buoy.

The land in the vicinity of The Snook is flat, but a few miles inland, it rises to a ridge of cultivated land which lies parallel to the coast. Hepburn Hill, 313m high, and Heiferlaw Hill, 157m high, stand 8.5 miles WSW and 8 miles SSW, respectively, of The Snook and are prominent. The summits of some of the Cheviots, such as Hedgehope Hill, 712m high, are visible farther inland, standing about 8 miles WSW of Hepburn Hill. The

Cheviot, 813m high, stands 2 miles W of Hedgehope Hill and its summit is marked by a conspicuous cairn.

**North Sunderland** (55°35'N., 1°39'W.), a small town, stands 0.5 mile NW of The Snook. The harbor, which dries, is used only by fishing vessels. It is formed by an outer pier and a breakwater. The entrance faces N and is 61m wide. Seahouses, a village, is situated at the SW side of the harbor. There are depths of 4m at HWS and 3.7m at HWN within the harbor. Vessels up to 30m in length and 2.7m draft can enter at HWS; vessels less than 30m in length can enter with drafts up to 3.7m. Local knowledge is advisable.

## The Snook to Port of Tyne

**2.12 Beadnell Point** (55°33'N., 1°37'W.), located 2 miles SE of The Snook, is low and wedge-shaped. A small and shallow harbor is located on the SW side of the point. It is used only by small craft and has an entrance, 8m wide. A church spire, situated 0.5 mile W of the point, shows prominently above the woods and a conspicuous silo stands on the N side of the point. Beadnell Bay, entered S of the point, is foul.

**Embleton Bay** (55°30'N., 1°36'W.) is entered between Castle Point, located 3.8 miles SSE of Beadnell Point, and a group of rocks lying SSE of Newton Point, 1.3 miles NNW. It affords good shelter to small craft during offshore winds. Vessels may anchor, in depths of 11 to 14m, good holding ground, about 0.9 mile N of Castle Point. Shoals and foul ground lie up to 1 mile NE of Newton Point and are marked by a buoy.

The E and S sides of Castle Point are formed by black perpendicular pillars, which shelve down to the sea. Its N side is cliffy. The ruins of Dunstanburgh Castle stand on the N side of the point and are very conspicuous.

**Newton Skere** (55°33'N., 1°29'W.), with a least depth of 22m, and Dicky Shad, with a least depth of 21m, lie about 1.8 miles ENE and 4.5 miles E, respectively, of Beadnell Point; the sea breaks heavily over these rocky banks during heavy gales.

**Craster Skeres** (55°29'N., 1°28'W.), consisting of rocky patches with a least depth of about 22m, lies 5 miles E of Castle Point. The sea breaks heavily over these patches during stormy weather. Several wrecks lie in the vicinity of these patches and may best be seen on the chart.

**Cullernose Point** (55°28'N., 1°35'W.) is located 1.7 miles S of Castle Point. The coast between consists of a sloping grassy bank. Craster, a village with a tower, is situated in an opening about halfway along this bank. A small harbor, formed by two piers, fronts the village. It is used by small craft and has a depth of 4m within it at HWS. Drying ledges lie N and S of the entrance and local knowledge is required.

Boulmer, a village, is situated on the coast 2.5 miles S of Cullernose Point. A prominent clump of trees stands at the W end of the village and a flagstaff stands close S of it. A small and shallow boat harbor fronts the village and beacons mark the passage leading through the rocks to it.

**2.13 Alnmouth Bay** (55°22'N., 1°34'W.) lies between Seaton Point, located 3.3 miles S of Cullernose Point, and Hauxley Point, 5.2 miles SSE. Coquet Island is located close off the S part of the bay. The village of Alnmouth stands on the N side of the mouth of the River Aln, which enters the bay 1.5 miles SW of Seaton Point.

Warkworth Harbour (Amble) lies at the mouth of the River Coquet, which enters the S side of the bay.

Seaton Point is low and rounded. It is fronted by rocky ledges which extend about 0.8 mile ESE of the point. Seaton Shad and Boulmer Stile, with depths of less than 10m, extend 0.7 mile farther S and are extensions of the above ledges; they are marked by a buoy.

**Alnmouth** (55°23'N., 1°37'W.) stands on the N side of the mouth of the River Aln. A church, with a conspicuous spire, stands in the center of the village. The harbor is formed by the lower reaches of the river. It is little used except by a few fishing boats and pleasure craft. The bottom consists of stiff clay covered with sand, and there are depths of 3.5m over the bar and in the harbor at HWS, but vessels lie aground at LW. The river is subject to freshets during the winter. Local knowledge is required as the position of the bar and width of the entrance channel are constantly changing.

A conspicuous group of radar antennas stands at an elevation of 248m, 6.5 miles W of Seaton Point. A conspicuous framework radio mast stands at an elevation of 250m, about 2 miles S of the antennas.

The coast between the River Aln and the River Coquet consists of sand hills which are only broken by a rocky cliff, 20m high, at the midpoint.

**2.14 Coquet Island** (55°20'N., 1°32'W.), located 0.8 mile NE of Hauxley Point, is fringed by drying ledges which extend up to about 0.2 mile from its N side. A main light is shown from a conspicuous tower, 22m high, standing on the SW extremity of the island.



**Coquet Island Light**

Steel Bush and North East Bush, two shoals, lie about 0.3 mile NNE of the island and are marked by a buoy. Pan Bush, located about 0.8 mile NW of Coquet Island, is a rocky and shallow shoal which lies at the N end of a spit and is also marked by a buoy.

The channel lying between Coquet Island and the mainland narrows to a width of only about 200m in the S part. It has a least depth of 1.2m, is unmarked, and requires local knowledge.

**Warkworth Harbour** (Amble) (55°20'N., 1°35'W.) ([World Port Index No. 31830](#)) is formed at the lower reaches of the River Coquet by two outer breakwaters and two inner jetties. The village of Warkworth stands 1.5 miles NW of the harbor

and the village of Amble stands on the S side of the entrance. A castle, with a conspicuous tower, stands at Warkworth.

The harbor, which is used only by fishing vessels and pleasure craft, has a depth of 1m and there are depths of 0.9 to 1.8m over the bar. The harbor entrance is 68m wide. Vessels up to 4m draft can enter at HW, but local knowledge is advised. Small vessels awaiting the tide are recommended to anchor, in a depth of 9m, sand and mud, about 0.8 mile NNE of the S breakwater head.

**Caution.**—Coquet Island is a designated bird reserve and unauthorized access is prohibited.

A dangerous wreck, with a depth of 1.7m, lies close ENE of Warkworth N breakwater head.

An outfall pipeline extends about 0.3 mile seaward from a point on the shore located close S of Warkworth South Breakwater and is marked by a lighted buoy.

**2.15 Druridge Bay** (55°17'N., 1°33'W.) is entered between Hauxley Point, at the S end of Alnmouth Bay, and Snab Point, 6 miles S. It has a low and sandy coast which is backed by moderately high land. Rocky ledges and detached rocks extend up to 0.6 mile seaward from Hauxley Point and are marked by a buoy. Shirlaw Pike, a hill 306m high, stands 10 miles W of Hauxley Point and can be identified by its steep N face. Simon-side Hill, 427m high, stands 5 miles SW of Shirlaw Pike and may also be seen from offshore in clear weather. A prominent cupola surmounts a large mansion, which stands in the midst of trees 0.7 mile NW of Snab point, and is visible from seaward.

Northern Hill, a rocky patch with a least depth of 3m, lies about 1.4 miles SE of Hauxley Point. Cresswell Skeres, consisting of two rocky patches with a least depth of 3m, lies 1.4 miles NNE of Snab Point.

Vessels may anchor, in depths of 9 to 11m, about midway between the entrance points of the bay.

**Newbiggin Point** (55°11'N., 1°30'W.), located 3.3 miles SSE of Snab Point, is 12m high and fringed by rocky ledges which extend up to 0.7 mile seaward. A church, with a spire, stands close within the point and is prominent when approaching from the N or S. The River Lyne flows into the sea, 1.7 miles NNW of the point. A prominent sand hill stands on the N side of its mouth and a conspicuous chimney stands on the S side of its mouth.

**Caution.**—A measured distance (1,852m) lies off Newbiggin Point and may best be seen on the chart. It is marked by two pairs of conspicuous framework towers. Vessels using this measured distance for trials should identify themselves to Cullercoats Coast Radio Station.

## **Blyth (55°07'N., 1°30'W.)**

[World Port Index No. 31820](#)

**2.16** Blyth stands on the SW side of the mouth of the River Blyth. The harbor is an artificial one, formed out of the natural course of the river.

**Tides—Currents.**—Tides rise about 5m at springs and 3.9m at neaps.

The coastal currents run SE and NW across the harbor entrance. Within the harbor, the currents are of no great strength.

**Depths—Limitations.**—The approach channel is dredged to a depth of 8.5m. Within the entrance, the fairway is dredged to a depth of 7.6m over a width of 85m as far as the Alcan Terminal. The remainder of the harbor is dredged to a depth of 6.8m.

South Harbor is dredged to a depth of 6.8m. The main berths include North Quay, 153m long, with a depth of 8.5m alongside, and West Quay, 153m long, with a depth of 7m alongside. There are also moorings for yachts.

The main berths on the river include the Alcan Terminal, 153m long, with a depth of 10.3m alongside, and Bates Wharf, 183m long, with a depth of 7.6m alongside.

The tidal basin at the head of the harbor has grain berths with depths up to 8.5m alongside. There are three drydocks at the S side of the river; the largest is 143m long and 18m wide.

Vessels up to 25,500 dwt, 191m in length, and 9.8m draft can be accommodated within the harbor. There are extensive facilities for ro-ro and bulk vessels.

**Aspect.**—The harbor, formed by the river, is about 2 miles long. It is protected on the E side by a low strip of land known as Link End. The entrance, which faces SE, lies between two breakwaters. Nine conspicuous wind generators stand along the E breakwater, which extends 0.8 mile SSE from the S end of Link End. South Harbor is situated close within the entrance and a tidal basin is situated at the head of the harbor. Most berths lie along the river.

Four conspicuous chimneys, 139m high, stand at a power station, 2 miles NW of the entrance. A main light is shown from a prominent tower, 14m high, standing on the head of the E breakwater. An outer fairway lighted buoy is moored 0.5 mile SE of the light. Link End is fronted by drying rocks and shoals which extend up to 0.5 mile seaward and are marked by a buoy. The approach and harbor fairways are indicated by lighted ranges which may best be seen on the chart.

**Pilotage.**—Pilotage is compulsory for vessels under tow and passenger vessels. It is advisable for vessels without local knowledge. The harbor can be contacted by VHF and pilots usually board within about 2 miles of the entrance. Vessels should send an ETA at least 24 hours in advance and then contact the harbor control office on VHF 2 hours and 1 hour prior to arrival.

**Anchorage.**—Vessels may anchor, in a depth of 17m, about 1 mile E of the head of E breakwater.

**Caution.**—A submarine power cable lies across the harbor, about 0.2 mile within the entrance.

Several dangerous wrecks lie in the approaches to the harbor and may best be seen on the chart.

A passenger ferry crosses the river in the upper harbor.

During onshore winds, a considerable scend may be sent into the harbor due to the conducting effect of the breakwaters.

The fairway channels are subject to shoaling and dredging operations are frequently carried out in the vicinity of the entrance.

**2.17** Between Blyth and Seaton Sluice, 2 miles SSE, the coast is low and sandy, with numerous chimneys standing inland. A prominent tower stands near the coast, 0.7 mile SW of the entrance to Blyth. From Seaton Sluice to Curry Point, 1 mile SE, the coast consists of a cliff fronted by rocky ledges which extend up to 0.4 mile seaward.

**St. Mary's Island** (55°04'N., 1°27'W.) is located close NE of Curry Point and connected to it by a causeway. The island is low and fringed by shoals. The tower structure of a disused lighthouse, 37m high, stands on the island and is conspicuous.



**St. Mary's Island Lighthouse (disused)**

**Brown Point** (55°02'N., 1°26'W.), fringed by rocky ledges, is located 2 miles SSE of Curry Point. The coast between is fronted by ledges and off-lying rocks.

A conspicuous white building, 44m high, stands near the coast, 1.5 miles NW of the point and a conspicuous white dome stands 0.6 mile SSE of it. Villages, which are situated inland, are visible from seaward along this stretch of coast.

Cullercoats, a village, stands on the coastal cliffs, 0.2 mile S of Brown Point. A small boat harbor is approached through a gap in the rocky ledges; the entrance is indicated by lighted range beacons. A prominent church, with a spire, stands 0.5 mile S of Brown Point. A conspicuous group of radio masts stands about 0.5 mile W of Cullercoats.

The coast between Brown Point and the entrance to the River Tyne, 1.4 miles SSE, is fronted by rocks. Bellhues Rocks, with a least depth of 7.4m, lie about 0.8 miles ESE of Brown Point.

**Caution.**—An extensive spoil ground dumping area, the limits of which may best be seen on the chart, lies centered 4 miles NE of St. Mary's Island.

## **Port of Tyne (Tynemouth) (55°00'N., 1°30'W.)**

[World Port Index No. 31765](#)

**2.18** The River Tyne empties into the sea at Tynemouth. The river banks are heavily industrialized and are the scene of great commercial activity. The river is navigable as far as Lemington, 15 miles above the entrance. However, depths are only maintained as far as Redheugh Bridge at Newcastle, 10 miles upriver. Both banks of the river are lined with numerous works and collieries.

The Port of Tyne includes the facilities at North Shields and South Shields which lie, respectively, on the N and S sides of the river, adjacent to the mouth; Jarrow, which lies on the S side, 3.5 miles above the mouth; and Newcastle and Gateshead, which lie, respectively, on the N and S sides of the river, 8 miles above the mouth.



The port is a main terminus for passenger and container traffic from northern Europe. In addition, oil platforms and associated structures are constructed here.



**Port of Tyne (Tynemouth)**

**Tides—Currents.**—Tides rise about 5m at springs and 3.9m at neaps at North Shields.

Off the entrance, the S current begins about 4 hours before HW at Tyne and the N current about 2 hours after HW at Tyne. The spring velocity of each is in excess of 1 knot. During the outgoing current from the river, there is frequently turbulence, especially with NE gales.

In the river entrance, the incoming current begins about 5 hrs 30 minutes before HW at Tyne and the outgoing current about 40 minutes after HW at Tyne; the times at which the currents begin change irregularly as the river is ascended. The spring velocity of the currents within the river is generally about 2.5 knots in each direction. The currents run in the direction of the channel, but set rather towards the outer banks at the bends.

With heavy freshets, which discharge an immense body of water, both the duration and the velocity of the outgoing current are increased and the incoming current being correspondingly reduced.

Gales from NE cause the highest sea at the entrance when the outgoing current is running strongly. Vessels should try to enter before the incoming current has ceased running, observing that at that time it will also be setting across the entrance. During N gales, vessels are advised to keep close under the lee of the North Pier. During S gales, especially with an outgoing current, vessels are advised to stay close under the lee of the South Pier.

**Depths—Limitations.**—Dredged depths in the fairway are maintained, as follows:

1. A depth of 8.6m from the entrance to Jarrow Quay Corner, a distance of about 3.2 miles.
2. A depth of 6m for 1.5 miles to Jarrow Staith.
3. A depth of 5.2m for 4.7 miles to Newcastle Swing Bridge.
4. Above Newcastle Swing Bridge, no authorized depths are maintained and vessels should consult the port operations service.

The entrance between the piers is 366m wide. When vessels using the entrance range reach the pier heads, they must alter course to navigate the river channel.

A speed limit of 6 knots is enforced within the port.

There are no restrictions of length and beam at the entrance, as these depend upon the berth to be used. Vessels are generally limited to a draft of 8m at LW and 11m at HW.

At Newcastle (54°58'N., 1°35'W.), the following six bridges span the river:

1. The Tyne Bridge, a road bridge with one span, is 114m wide. It has a vertical clearance of 24m. It is reported (2002) that a footbridge, with a vertical clearance of 25m over a width of 30m, is being constructed close below Tyne Bridge.
2. The Newcastle Swing Bridge has four spans, so constructed that the two central spans swing on a central pier. This provides a channel 31m wide on the N side and a channel 29m wide on the S side. When closed, the bridge has a vertical clearance of only 4.4m.
3. The Newcastle High Level Bridge has two levels and a vertical clearance of 24.7m. The center span swings on a central pier and provides a channel 27m wide on the N side, and a channel 30m wide on the S side.
4. The Queen Elizabeth II Bridge has a vertical clearance of 25m.
5. The King Edward Bridge has a vertical clearance of 25m. Two channels, each 89m wide, lead under the bridge. Upriver traffic uses the N channel; downriver traffic uses the S channel.
6. The Redheugh Bridge has a clearance of 29m.

**Shields Harbor** (55°00'N., 1°27'W.) includes North Shields and South Shields; it may be considered to lie between The Narrows, located 1 mile inward of the entrance, and Riverside Quay, situated 2.7 miles above the entrance. Fish Quay and Western Quay, situated on the N bank at The Narrows, are used by fishing vessels.

Albert Edward Dock is entered through a lock or a tidal entrance, with gates, which have depths of 9.1m at HWS and 8m at HWN. The lock is 105m long and 18.3m wide; the tidal entrance is 24m wide. The dock has normal depths of 6.7 to 7.9m. The main berths within the dock are Warehouse Quay, 356m long, and East Dock Wall, 162m long; both have a depth of 7.9m alongside. Vessels up to 146m in length, 20m beam, and 7.6m draft can enter this dock at HWS.

Tyne Dock is entered through an outer basin and a tidal entrance with gates. The entrance is 21.3m wide and has a depth of 10.7m at HWS. The former E and central entrances are closed. The dock has normal depths of 7 to 8.2m. The main berths within the dock are North West Quay, 243m long, with a depth of 8.2m alongside, and Factory Quay, 196m long, with a depth of 7m alongside. Vessels up to 122m in length, 19m beam, and 7.6m draft enter this dock at HWS.

The main berths in the river include the following:

1. Tyne Commission Quay, 335m long, with a depth of 7.1m alongside.
2. Tyne Commission Quay Extension, 118m long, with a depth of 6.2m alongside.
3. Car Ferry Terminal Ro-Ro No. 3 Quay, 125m long, with a depth of 7.1m alongside.



4. Ro-Ro No. 4 Quay, 140m long, with a depth of 7.5m alongside.

Riverside Quay, situated close W of Tyne Dock, includes a bulk wharf and provides the largest berth in the port. It is 514m long, with depths of 10.5 to 11m alongside.

It is reported (1999) that vessels up to 234m in length, 32.2m beam, and 12m draft have been accommodated alongside the bulk wharf at HW.

**Jarrow** (54°59'N., 1°29'W.) stands on the S side of Long Reach, about 3.5 miles from the river entrance; Wallsend, mainly consisting of fabrication and shipbuilding facilities, stands on the N bank.

A swinging area, about 360m in diameter and dredged to a depth of 8.6m, lies W of Riverside Quay. Tyne Coal Terminal, with a depth of 10.5m alongside, is situated on the S bank, adjacent to the swinging area.

The Tyne Car Terminal is situated close W of the Tyne Coal Terminal. There are three berths here, with dredged depths of 7 to 9.5m alongside.

Velva Liquids Terminal, 248m long, has a depth of 7.1m alongside and is situated on the N bank, adjacent to the swinging area.

Esso Tynemouth Oil Terminal is situated close W of the Velva Liquids Terminal and has a main berth, 274m long, with a depth of 9.5m alongside.

**Newcastle** (54°58'N., 1°35'W.) is situated on the sides and summits of the hills standing on the N bank of the river, about 8 miles upstream. Gateshead, on the S side of the river, stands on a steep declivity. Between Jarrow and Newcastle, numerous industrial and shipbuilding yards lie on both sides of the river.

Newcastle Quays extend E from Tyne Bridge along the N side of the river. The main quay, Spillers Grain Berth, is 237m long and has a depth of 8m alongside.

A yacht marina is situated on the N bank, E of Newcastle Quays.

The **River Tyne** (54°58'N., 1°35'W.) is navigable above Newcastle as far as Stella Power Station at Lemington, about 5 miles above the swing bridge. The depth is not maintained in this part of the river and vessels should contact the Port Operations Service for information. Between Newcastle and Lemington, the river is crossed by several bridges and power cables, the lowest having a vertical clearance of 6.4m.

Numerous other berths and facilities are situated along both sides of the lower reaches of the river and may best be seen on the chart. These include several drydocks, the largest of which is 259m long and 44m wide, with a depth of 8.8m over the sill at HWS. It can accommodate vessels up to 259m in length, 43m beam, and 10.5m draft.

**Aspect.**—The entrance is protected by two piers which extend seaward from the N and S banks of the river. A main light is shown from a prominent tower, 23m high, standing on the head of North Pier. The entrance channel is indicated by a directional sector light which may best be seen on the chart. It is reported (1998) that this light has a range of 19 miles at night and 5 miles by day.

Tynemouth Head, close N of the root of North Pier, is a very conspicuous promontory surmounted by the ruins of a priory and a castle. Spanish Battery, situated 0.2 mile S of Tynemouth Head, stands on a prominent cliff, 17m high. A high bank extends 0.5 mile W from this cliff and forms the NW side of the



**Entrance to the River Tyne**

river entrance. Collingwood Monument is prominent and stands close W of Spanish Battery. A church, with a conspicuous spire, stands 0.25 mile NW of the monument.

A prominent cupola, surmounting the town hall building, is situated 0.6 mile SW of the root of South Pier.

Within the river, a conspicuous gas works stands on the N bank, 1.5 miles SW of Spanish Battery. A prominent pylon, 129m high, stands near an oil terminal on the S bank, about 1.1 miles SSW of the gas works.

**Pilotage.**—Pilotage is compulsory for vessels over 50m in length. Pilots can be contacted by VHF and usually board within 3 miles of the entrance. Vessels should send an ETA at least 24 hours in advance and a confirmation message 2 hours in advance, or when within VHF range.

**Regulations.**—The following requirements apply to all vessels of over 50 grt:

1. Vessels must send an ETA to the Port Operations Service at least 24 hours in advance or upon leaving a previous port if nearer; vessels must state their destination within the port and details of any dangerous cargo.

2. When within VHF range, inbound vessels must report on VHF channel 12 to the Port Operations Service. They must state name, draft, previous port, destination, details of any defects, requirements for port services, and confirmation (tankers only) that a Tanker Check List has been completed.

3. When within the port area, vessels should maintain a listening watch on VHF channel 12, and report when passing the reporting points, as indicated on the chart, or when anchoring. The reporting points are North Pier Light, Whitehall Point (North Shields), Bill Point, and Tyne Bridge.

4. Vessels outbound or shifting berth should report 1 hour in advance and immediately prior to commencement of the maneuver.

5. Vessels intending to navigate through the Newcastle Swing Bridge and requiring it to be open should give at least 24 hours advance notice to the Port Operations Service.

The Port Operations Service may be contacted by E-mail, as follows:

[harbouroffice@portoptyne.co.uk](mailto:harbouroffice@portoptyne.co.uk)

**Signals.**—A vessel requesting entry to the wet docks should sound three prolonged blasts for Tyne Dock and four prolonged blasts for Albert Edward Dock.

Three red lights shown at either dock entrance indicate that vessels may not enter.

Three green lights shown at either dock entrance indicate that vessels may enter.

**Anchorage.**—An anchorage area, the limits of which are shown on the chart, lies centered 1.5 miles NE of the river entrance.

**Caution.**—Ferries cross the river at various points as shown on the chart.

An overhead power cable, with a vertical clearance of 65m, spans the river about 3.2 miles above the entrance.

Due to silting, depths within the port area are liable to change.

Several wrecks lie in the vicinity of the approach and may be best seen on the chart. A wreck, with a depth of 10.8m, lies in the entrance between the pier heads.

A foul ground area, the limits of which are shown on the chart, lies about 0.5 mile SSE of the head of South Pier.

## Port of Tyne to Sunderland

**2.19 Marsden Point** (54°59'N., 1°23'W.) is located 18 miles SSE of the entrance to the Port of Tyne. The coast between is first composed of sand hills, fronted by sands, and then is backed by a gentle hill and fronted by rocky ledges. A prominent brick elevator shaft stands on the cliffs, 0.6 mile S of the point.

**Lizard Point** (54°58'N., 1°22'W.) is located 1.2 miles SE of Marsden Point. The coast between is backed by a limestone bank, 15 to 18m high, and fringed by ledges and several detached rocks, the largest being 26m high. A conspicuous disused light tower, 23m high, stands close inside the point. A prominent water tower, with an elevation of 103m high, stands on Cleadon Hill, 1.3 miles W of the point.

**Souter Point** (54°57'N., 1°21'W.), located 1.1 miles SSE of Lizard Point, is 6m high. It can be easily distinguished when approaching from the N or S. The coast between this point and the River Wear, 2.5 miles S, is fronted by rocky ledges and shoals. A rock and a wreck, both of which dry, lie about 1 mile S of Souter Point and are marked by a buoy. Mill Rock, with a depth of 11.6m, lies about 1 mile SE of the same point. A prominent disused light tower stands on the coast 1 mile N of the river mouth.

**Caution.**—A rifle range is situated in the vicinity of Souter Point. Its seaward safety limits are marked by lighted buoys moored 1.3 miles NE and 1.4 miles ESE of the point.

A spoil ground dumping area, which may be best seen on the chart, lies centered 4 miles ENE of Lizard Point.

An outfall pipeline, which may best be seen on the chart, extends about 0.6 mile seaward from a point on the shore located 0.8 mile SSW of Souter Point. The diffuser at the outer end is marked by a buoy.

## Sunderland (54°55'N., 1°22'W.)

[World Port Index No. 31760](#)

**2.20** Sunderland stands on both banks at the mouth of the River Wear, which extends W for about 65 miles. In addition to

being a commercial port it is also a base for support vessels serving the North Sea oil and gas production platforms.

**Tides—Currents.**—Tides rise about 5.2m at springs and 4.2m at neaps.

In the river, the incoming current begins about 6 hours 5 minutes before HW at Tyne and the outgoing current about 5 minutes before HW at Tyne.



Entrance to the River Wear (Sunderland)



Sunderland

**Depths—Limitations.**—The outer harbor is protected by two breakwaters. Roker Pier, the N breakwater, curves ESE and New South Pier, the S breakwater, curves NNE. Both are fronted by shallow rocky ledges.

White Stones, a group of rocky shoals with a least depth of 2.6m, lie about 1.7 miles SSE of the harbor entrance. Hendon Rock, with a least depth of 0.9m, lies about 1.2 miles SSE of the harbor entrance.

The outer harbor entrance is 200m wide and lies between the head of Roker Pier and an obstruction, marked by a lighted buoy, lying close N of the head of New South Pier. The entrance channel within the outer harbor is dredged to a depth of 7.8m. A fairway channel, dredged to a depth of 7.6m, leads into the inner harbor and up to the W end of Corporation Pier, a deep-water berth on the S side of the river. Above this berth, the fairway channel is dredged to a depth of 5.7m as far as Wearmouth Bridge. It is reported that the shipyards situated above this bridge are closed.

The Sunderland Railway Bridge, with a vertical clearance of 25m, spans the river about 1 mile above the entrance. The Wearmouth Bridge, situated close E of the railway bridge, and the Queen Alexandra Bridge, situated 1.2 miles above it, both have greater vertical clearances.

A swinging basin is located close W of the entrance to the inner harbor. North Dock, entered to the N of this swinging basin, is 256m long, 61m wide, and dredged to a depth of 6.3m. Vessels up to 98m in length, 15.8m beam, and 5.2m draft can be accommodated alongside.

Corporation Pier, situated on the S bank close W of the swinging basin, is a deep-water berth. It is 323m long and has a dredged depth of 8.8m alongside. Vessels up to 213m in length and 8.4m draft have been accommodated here.

South Docks, consisting of Hudson Dock and Hendon Dock, are entered S of the swinging basin through Half Tide Basin which has a gateway, 21.3m wide. Hudson Dock is entered from Half Tide Basin through a gateway, 19.2m wide, which has depths over the sill of 9m at HWS and 7.9m at HWN. Hendon Dock is entered from Hudson Dock through a passage 62m long and 27m wide.

South Docks can accommodate vessels up to 142m in length and 18.9m beam, with drafts up to 8m at springs and 7.2m at neaps. It is reported to be mainly used by coasters.

Within the port, there are facilities for bulk, tanker, ro-ro, container, and fishing vessels.

**Aspect.**—South Outlet, a former entrance, is situated about 0.8 mile S of the port entrance and is permanently closed. The coast on both sides of the entrance to the river is backed by a dense industrial area which contains numerous towers and chimneys.

Tunstall Hills, with twin summits called Maiden Paps, rise to a height of 109m about 2.5 miles SSW of the entrance and are visible from seaward. Warden Law, a conical hill 160m high, stands 2.5 miles SSW of Maiden Paps.

A main light is shown from a prominent tower, 23m high, standing on the head of Roker Pier.

Prominent landmarks on the N side of the river include a church tower standing 0.4 mile NW of the root of Roker Pier and five blocks of flats standing WSW of the harbor entrance. Prominent landmarks on the S side of the river include eight blocks of flats standing SW of the harbor entrance; a chimney, 107m high, standing at an incinerator, 1.6 miles WSW of the harbor entrance; a chimney, 81m high, standing at a paper works, 2 miles SSW of the harbor entrance; and a group of gas-holder tanks standing 1.7 miles SSW of the harbor entrance. In addition, a conspicuous chimney, with a pronounced collar at the top, stands about 3.5 miles SSW of the harbor entrance.

**Pilotage.**—Pilotage is compulsory for vessels under tow or carrying dangerous cargo. It is also compulsory within the South Dock complex and W of Corporation Pier. Pilotage is advisable for other vessels without local knowledge.

Pilots may be contacted by VHF and usually board within 1.5 miles of the harbor entrance.

**Regulations.**—Vessels must send an ETA, with details of draft and any dangerous cargo, to the Port Operations Service at least 12 hours in advance, with any amendments at least 2 hours before arrival. When approaching the port, vessels must maintain a continuous VHF listening watch. The port may be contacted by E-mail, as follows:

[infor@portofsunderland.org.uk](mailto:infor@portofsunderland.org.uk)

**Signals.**—When it is dangerous to enter or leave the harbor, three red flashing lights, disposed vertically, are shown from a framework tower standing on the pilot station at Old North Pier.

Control signals for South Docks are shown from the framework tower on the pilot station and from a tower standing at the gateway of Hudson Dock, as follows:

1. Three green lights shown from both positions indicate that vessels may enter the docks.
2. Three green lights shown from the gateway tower and three red lights shown from the pilot station tower indicate that vessels may leave the docks.
3. No signal shown from either position indicates that the dock is closed to traffic.

**Anchorage.**—Vessels may anchor, in depths of 12 to 14m, about 1 mile E of the head of Roker Pier. The holding ground is good, but care must be taken to avoid the wrecks in the vicinity.

**Caution.**—Numerous wrecks, some dangerous, lie in the approaches to the harbor entrance and may be best seen on the chart.

Depths in the dredged channels are subject to change because of silting and strong winds.

Depths in the wet docks are not uniform and, in some cases, may be less than that over the entrance sill.

Gales from ENE and ESE send a heavy sea into the outer harbor.

A spoil ground dumping area, which may be best seen on the chart, lies centered 2 miles E of the harbor entrance.

An outfall pipeline, which may best be seen on the chart, extends about 0.8 mile seaward from the vicinity of South Outlet, the former entrance.

**2.21 Seaham** (54°50'N., 1°19'W.) ([World Port Index No. 31750](#)) stands on the coast 5 miles S of Sunderland. The port consists of an outer harbor, protected by two curving breakwaters, and an inner wet dock, protected by short inner breakwaters.

**Tides—Currents.**—Tides rise about 5.2m at springs and 4.1m at neaps.

**Depths—Limitations.**—Louis Rocky Patch, a detached shoal with a least depth of 8.6m, lies about 0.5 mile E of the harbor entrance. Shallow ledges and banks extend seaward from the shores on the N and S sides of the outer breakwaters. North Scar, a shoal patch with a least depth of 1m, lies 0.2 mile SSE of the harbor entrance.

The outer harbor entrance, which is 85m wide, has a depth of 2.1m. The fairway channel leading to the wet dock has a least depth of 1.4m. A rocky patch, with a least depth of 1.9m, lies close E of the harbor entrance and should be passed to the S. Vessels cannot enter at LW.

A tidal basin situated on the N side of the inner harbor has depths of 5.2m at springs and 3.7m at neaps. It has an entrance, 10m wide, and is used by fishing vessels.

South Dock, a wet dock, is entered through a gate, 19.8m wide, with depths over the sill of 6.7m at springs and 5.9m at neaps. It has 625m of total quayage. Vessels up to 6,500 dwt, 120m in length, and 16m beam have been accommodated. Drafts are generally limited to 6.5m at springs and 5.5m at neaps, but depend upon the rise of tide.



**Aspect.**—The town stands in a break in the coastal cliffs which rise to heights of 15 to 18m. A light is shown from a prominent structure, 10m high, standing on the head of the N breakwater. A conspicuous chimney stands on the coast, 0.8 mile NW of the harbor entrance.

A chemical works and several blast furnaces stand along the coast on the S side of the harbor. A chimney, standing 3 miles S of the harbor, is also prominent because of its pronounced collar at the top.

**Pilotage.**—Pilotage is not compulsory, but is recommended for vessels without local knowledge. Pilots are available and may be contacted by VHF. The wet dock gates are only open from 2 hours 30 minutes before to about 1 hour 30 minutes after HW.

**Regulations.**—Vessels must send an ETA, with necessary details, to the Port Operations Office through the agent at least 24 hours in advance or on departure from the last port.

Vessels should not exceed a speed of 5 knots in the harbor.

**Signals.**—Control signals are shown from the N side of the dock entrance, as follows:

1. A red light indicates that vessels may enter the dock.
2. A green light indicates that vessels may leave the dock.

**Anchorage.**—Anchorage may be obtained, in depths of 8 to 16m, between 0.3 and 1 mile NE of the N breakwater. The bottom is sand and fairly clear of rocks, but there is no protection.

**Caution.**—During SE gales, the gates at the wet dock cannot be opened due to the scend caused in the dock.

Gales from the ESE cause the heaviest seas in the approach and entry should not be attempted.

Outfall pipelines, which may best be seen on the chart, extend about 0.9 mile seaward from points located on the shore 1 mile and 3.5 miles S of the harbor entrance.

## Hartlepool (54°42'N., 1°11'W.)

World Port Index No. 31740

**2.22** Hartlepool is located at the NW end of Hartlepool Bay, 4 miles NNW of the entrance to the River Tees. It is administered by the Tees and Hartlepool Port Authority. In addition to the handling of various cargo vessels, the port has facilities for the construction of structures and pipelines used in the North Sea oil and gas fields.



Hartlepool

**Tides—Currents.**—Tides rise about 5.4m at springs and 4.2m at neaps.

The tidal currents, both on the flood and ebb, set directly across the entrance to the Outer Harbor.

**Depths—Limitations.**—The entrance channel is dredged to a depth of 5.7m. Outer Harbor, outside of the entrance channel, dries.

Victoria Dock is dredged to a depth of 6.8m. Victoria Quay, on the NE side, is 150m long; Irvine Quay, on the SW side, is 380m long; and the Deep Water Berth, on the NW side, is 295m long. These quays are all dredged alongside to a depth of 9.5m. A ro-ro berth is located at the N end of Victoria Quay.

Vessels of up to 190m in length, 33m beam, and 8m draft can be accommodated; however, an underkeel clearance of 1.2m must generally be maintained.

North Basin, the wet dock, is 198m long and 73m wide. It provides 494m of total quayage and has a depth of 7.9m. The gateway is 21.3m wide and has a depth of 8.1m over the sill at HWS.

Union Dock, Jackson Dock, and Coal Dock, situated S of Central Dock, have been separated from the commercial docks to form a marina. They are entered through a lock, which is approached by a narrow channel dredged to a depth of 0.8m.

**Aspect.**—The port is protected to the E by the Hartlepool Peninsula, of which The Heugh is the low and rocky E extremity. The seaward cliffs of this peninsula are being eroded and protecting walls have been constructed outside them. A main light is shown from a prominent tower, 13m high, standing on The Heugh.

Rocky ledges and shoals front the peninsula and a breakwater extends 0.2 mile SSE from a point located on the shore close SSW of the light. The Stones, a group of detached rocks, lies close NE of this breakwater head.

Long Scar, a detached ledge of rock fringed by patches, is located 1.3 miles SSW of The Heugh and dries 2m. An isolated group of shoal patches, with depths of less than 4m, lies about 0.3 mile NE of the E end of Long Scar and is marked by a lighted buoy which should be passed to the N.

A conspicuous church tower stands 0.2 mile WSW of the light and a conspicuous chimney, 92m high, stands at the magnesite works, 1.5 miles NW of The Heugh. A prominent chimney, 48m high, stands 0.8 mile NW of The Heugh and is reported to be used as a mark when approaching the entrance range.

For other landmarks situated to the S of the port, [see Teesport in paragraph 2.23](#).

A dredged entrance channel passes through the Outer Harbor and leads into Victoria Dock, a tidal basin. This channel is marked by lighted buoys and beacons and indicated by a directional light which may be best seen on the chart. A series of wet docks are entered through a lock situated on the W side of the tidal basin. West Harbor, located W of the entrance channel and S of the wet docks, is entered directly from Hartlepool Bay and only used by small craft and yachts.

**Pilotage.**—Pilotage in the approaches to Hartlepool is provided by the Tees and Hartlepool Pilotage Service (Tees Bay Pilots); [for further information, see paragraph 2.23](#).

**Regulations.**—A Port Operation and Information Service is maintained for Hartlepool and the River Tees. For more information, [see Regulations for Teesport in paragraph 2.23](#).



Prior to entering the Hartlepool approach channel, all vessels must obtain permission by VHF from the Port Dockmaster.

**Signals.**—Traffic signals are shown from a mast standing on the NE side of the entrance to Victoria Dock and are visible within the harbor and to seaward. A single fixed amber light, shown by day and at night, indicates that vessels may enter but may not leave the port. When no such light is shown, vessels may leave but may not enter the port.

**Anchorage.**—Vessels may anchor, in a depth of 9m, about 0.7 mile SE of The Heugh. Small vessels may anchor, in depths of 5 to 6m, muddy sand over clay, about 0.6 mile S of The Heugh, close NE of the entrance channel.

**Caution.**—The harbor is liable to silt and depths may be reduced. Vessels approaching the maximum dimensions should contact the port in advance.

Hartlepool, like the entrances of the River Tyne and Sunderland, is often shrouded in a dense cloud of smoke and coal dust which prevents the land from being seen at any considerable distance.

Vessels entering or leaving this port, or crossing Tees Bay, should not impede vessels using the approach channel for the River Tees.

Numerous wrecks and a spoil ground area lie in the approaches to the port and may best be seen on the chart.

Platforms and pipeline structures for the North Sea oil and gas fields are constructed within the port and may be encountered entering, leaving, or in the vicinity of the harbor.

## Teesport (River Tees) (54°39'N., 1°08'W.)

World Port Index No. 31720

**2.23** The River Tees discharges into the head of Tees Bay, which is about 6 miles wide between The Heugh and Redcar, and exposed to E winds. The coast on either side of the river is low and sandy. The estuary, which is entered between breakwaters, leads in a general SSW direction to the harbors upriver.

Teesport, located about 3 miles upriver, is the center of a large petrochemical complex. Middlesbrough is located about 6 miles from the river entrance and Billingham, above which dredged depths are no longer maintained, is located about 1.5 miles farther upriver. The port is administered by the Tees and Hartlepool Port Authority.

**Tides—Currents.**—Tides rise about 5.5m at springs and 4.3m at neaps.

Off the entrance to the River Tees, the SE current and the NW current begin, respectively, about 3 hours before and 3 hours after HW Tees. The spring velocity in each direction is generally 1 to 1.5 knots, but has been reported to reach 2 knots. During the outgoing current from the river, especially with E or NE gales, turbulence may develop.

In the river entrance, the outgoing current commences at about 40 minutes before HW. The incoming current commences about 5 hrs 20 minutes before HW. The general spring velocity in the river is 2 to 3 knots in each direction. The currents run in the direction of the channel, but set towards the outer banks at bends.

During the ebb, there is often turbulence where Seaton Channel enters the river.

With freshets, both the duration and the velocity of the current is increased and reduced accordingly.

**Depths—Limitations.**—The approach channel, 240m wide, is dredged to a depth of 15.4m from its seaward entrance to within the breakwaters. The channel is then dredged to a depth of 14.1m as far as Redcar Ore Terminal, 1.5 miles above the mouth, and then to a depth of 10.4m as far as 0.5 mile SW of Tees Dock. The river channel is then progressively reduced to a dredged depth of 4.5m at Billingham, 7 miles above the entrance.

Seaton on Tees Channel, entered on the W side of the river 1.2 miles above the entrance, is no longer maintained. All vessels must obtain permission to use this channel. A nuclear power station stands on the N side of this channel and its intakes are marked by beacons.

Teesport, located from 1.5 to 4.5 miles within the entrance of the river, contains several major cargo-handling facilities. The main facilities situated along the W side of the river are listed below.

Phillips Norsesea Oil Terminal is situated about 1.5 miles above the entrance. It consists of two berths along the W side of the river and six berths located within a basin. The two river berths and the two berths situated on the W side of the basin are all 295m long and have a depth of 18.2m alongside. They can accommodate tankers up to 150,000 dwt and 295m in length. The four berths on the E side of the basin have depths of 14 to 15.6m alongside and can accommodate LPG carriers of up to 60,000m<sup>3</sup>.

Seal Sands, an extensive petrochemical storage complex, is situated above the oil terminal and is fronted by eight berths with depths of 7.2 to 12.7m alongside. Vessels up to 80,000 dwt and 271m in length can be accommodated.

The main cargo-handling facilities situated along the E side of the river are listed below.

Redcar Ore Terminal is situated 1.2 miles above the entrance and has a berth, 306m long, with a depth of 17.3m alongside. Generally, vessels up to 175,000 dwt, 305m in length, and 16.5m draft can be accommodated. It is reported that, on special occasions, vessels up to 220,000 dwt and 17m draft can be handled. A disused crude oil jetty is situated 0.6 mile S of the ore terminal.

A riverside ro-ro berth, with a depth of 10.9m alongside, is situated close NE of the disused oil jetty.

Teesport Container Terminal is situated close SW of the disused oil jetty. It provides 294m of quayage, with depths of 7.5 to 8.5m alongside.

Tees Dock, a tidal basin, is entered 1.1 miles above the ore terminal and has a center channel dredged to a depth of 8.8m. Within the basin, there are eight berths, 183 to 223m long, with depths of 8.8 to 10.9m alongside, which handle general cargo, bulk, and ro-ro vessels.

A swinging area, dredged to a depth of 8.8m, is located in the vicinity of the entrance to Tees Dock.

An overhead power cable, with a vertical clearance of 60.8m, spans the river close above Tees Dock; a tunnel crosses the river close E of this cable.

Queen Elizabeth II Jetty, a tanker berth, is situated close above Tees Dock and has a dredged depth of 10.9m alongside. It can handle vessels up to 40,000 dwt and 198m in length.

West Byng Jetty, a tanker berth, is situated close above Queen Elizabeth II Jetty and has a dredged depth of 10m alongside. It can handle vessels up to 40,000 dwt and 198m in length.

Tees Offshore Base, situated 1.2 miles above West Byng Jetty, specializes in oil and gas exploration support and rig module construction. It is fronted by a quay, 860m long, with a depth of 6.5m alongside.

Middlesbrough (54°35'N., 1°14'W.) is a large manufacturing city and a center of the iron and steel trade. Middlesbrough Dock is situated on the SE side of the river, 3 miles above Tees Dock. However, it is no longer used for shipping and the lock gates are kept open permanently.

A transporter bridge, with a vertical clearance of 48m, crosses the river 0.5 mile above the entrance to Middlesbrough Dock.

The Tees Bridge (Newport Bridge) spans the river about 2 miles above the transporter bridge. It is permanently in the down position and has a vertical clearance of only 6.4m. An overhead cable, a submarine gas pipeline, and a submarine power cable cross the river in the vicinity of this bridge.

Numerous private wharves, with depths of 4.7 to 7.5m alongside, are situated along both sides of the river between Tees Offshore Base and the Tees Bridge (Newport Bridge).

Ro-ro vessels up to 200m in length and 35m beam can be accommodated in the port. For entering the port, vessels are generally restricted to a length of 305m, a beam of 48m, and a draft of 16.5m. However, depending upon the rise of tide and weather, vessels up to 17m draft have entered the port. Vessels with drafts over 16.2m or with unusual configurations (oil rigs, etc.) are subject to prior consultation with the port authorities.



**Entrance to the River Tees**

**Aspect.**—The river is entered between North Gare Breakwater and South Gare Breakwater. The area between the embankments at the mouth is, for the most part, occupied by sand banks which uncover at half ebb. The river leading between these sand banks is confined by training walls so as to form a channel. The training walls are raised to about 2.1m above the low water level.

From a considerable distance seaward, the glare from several flares and blast furnaces may be sighted.

Two conspicuous cooling towers, 74m and 77m high, stand about 2.6 miles W of the river entrance.



**Teesport (Seal Sands)**

Numerous chimneys, cranes, and tanks stand within the industrial areas bordering the river, and care is required when identifying specific landmarks.

A main light is shown from a tower, 13m high, standing on the head of South Gare Breakwater and a radar tower stands close to it.

Fairway Lighted Buoy, equipped with a racon, is moored about 2.6 miles NE of the river entrance. The dredged approach channel, which is entered 0.7 mile SW of the outer fairway lighted buoy, is marked by lighted buoys and indicated by a lighted range. The fairway channel throughout the river is marked by buoys, lighted buoys, and beacons.

For additional landmarks and aids located to the N of the entrance, [see Hartlepool \(paragraph 2.22\)](#).

**Pilotage.**—Pilotage is provided by the Tees and Hartlepool Pilotage Service (Tees Bay Pilots) within the following two compulsory areas:

1. The Tees Approach Channel and the River Tees inward of Tees North Lighted Buoy (54°40.4'N 1°07.2'W.).
2. The Hartlepool Approach Channel and dock inward of No. 1 Lighted Buoy (54°41.3'N 1°10.7'W.).

Pilotage is compulsory within the two areas for vessels, as follows:

1. Vessels over 95m in length.
2. Vessels with a summer dwt over 4,000 tons.
3. Vessels with a grt over 4,000 tons.
4. Vessels over 20m in length carrying a dangerous substance, oil, or a marine pollutant in bulk.
5. Vessels over 20m in length carrying explosives (class 1.1) in excess of 1,000 kg.
6. Vessels requiring the services of a tug.
7. Vessels over 80m in length in the navigable area of the Tees between No. 23 Lighted Buoy (54°35.6'N., 1°10.9'W.) and the inner limit of the port authority jurisdiction.

Vessels moving along a quay without letting go from that quay are exempt from pilotage.

Pilots may be contacted by VHF and generally board in the following positions:

1. Tees and Hartlepool North—54° 42.80'N, 1° 05.05'W
2. Tees and Hartlepool South—54° 40.94'N, 1° 04.60'W

**Regulations.**—A Port Operation and Information Service is maintained for Hartlepool and the River Tees area. The service provides radar surveillance which covers the approaches up to a distance of about 12 miles offshore.

Vessels carrying dangerous cargo should notify and report to Tees Port Control at least 24 hours in advance of entering the approach channel.

Vessels over 20m in length intending to enter, move within, or leave the Tees River should notify the Tees Port Control at least 6 hours in advance.

Vessels over 20m in length intending to transit the Tees River channel (inside the North and South Gare Breakwaters) should request permission from Tees Port Control 1 hour in advance. The permission expires 30 minutes after the time specified and further permission must be obtained.

All vessels should obtain permission from Tees Port Control before navigating in Tees Approach Channel or river channel seaward of the overhead power cables (54°36'N., 1°10'W.) when the "Channel Closed" signals are exhibited, or when the visibility is less than 1,000m.

All vessels underway within the river and vicinity of the port should keep a continuous listening watch on VHF channel 14.

Vessels may obtain navigational and port operations information at any time from the Tees Port Control by VHF, fax, telephone, or telex.

When vessels of over 200m in length are navigating the river, a period of traffic control is imposed by Tees Port Control. During this period, only vessels with permission may move within the port.

Vessels carrying hazardous cargo may on occasion be restrained from entering the river or channel until a safe passage is available.

All vessels over 20m in length must enter the Tees approach channel N of a line joining the two outer channel lighted buoys. Exceptions are only allowed with permission of the Tees Port Control.

The Port Operation and Information Service can be contacted by E-mail, as follows:

[harbourmaster@thpal.co.uk](mailto:harbourmaster@thpal.co.uk)

**Signals.**—Traffic signals are displayed from a mast at the head of South Gare Breakwater and from a tower at Tees Dock.

The signals below indicate that vessels must obtain specific authority from Tees Port Control to enter Tees Approach Channel from seaward or the main river channel W of Tees Dock from upriver:

1. At South Gare Breakwater:
  - a. By day—A white light flashing every second.
  - b. At night—Three red lights, vertically disposed.
  - c. In fog—Two blasts of 6 seconds duration every 30 seconds.
2. At Tees Dock:
  - a. By day—A white light flashing every second.
  - b. At night—A green light between two red lights, vertically disposed.

These signals are usually shown when a deep-draft vessel is underway in the river channel.

Tees Dock traffic signals are, as follows:

1. A white occulting light shown every 10 seconds indicates that vessels may enter the dock.
2. A white flashing light showing group three every 10 seconds indicates that vessels may leave the dock.



**Tees Dock and Norsesea Oil Terminal**

**Anchorage.**—Large vessels should anchor to seaward of Tees Fairway Lighted Buoy and the prohibited anchorage areas situated in the vicinity.

**Caution.**—At night, the glare from the numerous blast furnaces, which border the estuary, is generally visible to seaward and care is necessary in distinguishing the navigational lights.

Submarine pipelines, which may best be seen on the chart, extend seaward to the North Sea oil and gas fields from points located along the shore about 1.2 miles WNW and 2 miles ESE of the river entrance.

An area, within which fishing and anchoring are prohibited, lies in the vicinity of Tees Fairway Lighted Buoy and may be best seen on the chart.

Several foul and spoil areas lie within the vicinity of the approach channel and may be best seen on the chart.

Dredged depths within the river are subject to silting.

Numerous wrecks, some dangerous, lie in the vicinity of the approach to the river and may be best seen on the chart.

Large structures such as oil rigs may be encountered entering, leaving, or in the vicinity of the port.

## Teesport to Flamborough Head

**2.24 Redcar** (54°37'N., 1°04'W.) stands at the E entrance point of Tees Bay. The coast in this vicinity is low and fronted by detached ledges and shoals which extend up to 1.2 miles offshore. A tower and two churches, with spires, stand in the town and are prominent from seaward.

Salt Scar, a rocky ledge which dries, fronts the shore and extends up to about 0.8 mile seaward. It is the outermost danger in this vicinity and is marked by a lighted buoy moored about 2.3 miles NE of Redcar.



Eston Nab Radio Tower stands at an elevation of 239m, 4 miles SW of Redcar, and is conspicuous from seaward.

Hunt Cliff, located 4.5 miles ESE of Redcar, is an almost perpendicular cliff. It is a dark red color and stands 110m high. Warsett Hill, 164m high, stands about 0.5 mile S of this cliff and has a well-defined summit.

Captain Cook's Monument (54°29'N., 1°05'W.) stands at an elevation of 322m, 8 miles SW of Hunt Cliff, and is very conspicuous from seaward.



**Captain Cook's Monument**

Prominent marks in this vicinity include church towers standing at Marske-by-the-Sea, 2 miles SE of Redcar and at Saltburn-by-the-Sea, 3.5 miles SE of Redcar.

Between Hunt Cliff and Cowbar Nab, 5.5 miles ESE, the coast is formed by mostly one continuous line of cliffs which vary from 33 to over 200m high. The most conspicuous is Redcliff, located 2 miles WNW of Cowbar Nab, which is deep red in color and one of the boldest features along this whole coast. This stretch of coast is subject to heavy landslides.

A conspicuous radio mast stands at the top of a hill, about 0.5 mile S of Redcliff. A prominent group of chimneys stands at an elevation of 114m on a headland, about 2.4 miles W of Redcliff. During S winds, small craft may obtain anchorage, in depths of 9 to 11m, clay, in Skinningrove Wick, located 1.7 miles WNW of Redcliff.

**Cowbar Nab** (54°34'N., 0°47'W.) is prominent. Old Nab, a low black cliff with a flagstaff, is located 0.5 mile E of the point. A group of conspicuous chimneys stands at Boulby, about 1 mile W of Cowbar Nab.

The village of Staithes is situated close within Cowbar Nab. The small harbor, used by fishing vessels, is formed by two breakwaters. The entrance faces NE and is 61m wide. Within the harbor, which dries, there is a depth of 4.6m at HWS.

**Runswick Bay** (54°32'N., 0°44'W.), located 2.5 miles SE of Cowbar Nab, is encumbered with sunken ledges, particularly off Kettle Ness, its SE entrance point. A village stands on the W side of the bay.

**Caution.**—Because of the irregularity of the coast between Hunt Cliff and Whitby, vessels without local knowledge are advised not to approach within depths of less than 20m.

An outfall pipeline, which may best be seen on the chart, extends 1 mile NE from the shore at the E end of Redcar.

A submarine cable extends seaward from the shore at the E end of Redcar and may best be seen on the chart.

A disused submarine cable extends seaward from the shore in the vicinity of Marske-by-the-Sea, 2 miles SE of Redcar, and may best be seen on the chart.

An outfall pipeline extends about 1.3 mile NNE from the shore at Boulby, 1 mile W of Cowbar Nab, and is marked by a lighted buoy.

**2.25 Whitby** (54°29'N., 0°37'W.) ([World Port Index No. 31700](#)) stands on both sides of the mouth of the River Esk, 5 miles SE of Runswick Bay. It is a small commercial port which supports a fishing fleet and also a yachting center.

**Tides—Currents.**—Tides rise about 5.4m at springs and 4.3m at neaps.

In the roadstead, the tidal currents are weak, but the SE flood current and the NW ebb current run strongly across the harbor entrance. During W or SW gales, the flood current may attain rates of 3 knots in the roadstead and 5 knots in the vicinity of the fairway lighted buoy while the ebb current is negligible.

The freshets discharged by the river are often sudden and heavy and may run between the piers with a rate of up to 5 knots. In dry weather, the flow is hardly perceptible. The tidal character of the river has been greatly curtailed by an upriver dam and the scour through the harbor is almost entirely dependent on the land floods.

**Depths—Limitations.**—The harbor is protected by two outer and inner piers. Whitby Rock is located close E of the harbor entrance. The Scar, a rocky ledge, lies inshore of this rock. These dangers, which are covered with kelp, dry in places and the swell breaks heavily over them.

The approach to the harbor, which has depths of 5.5 to 13m, passes W of Whitby Rock and The Scar. The bar, a flat ledge of shale extending across the entrance, has a depth of 1.4m. The inner piers form an entrance, 49m wide. These depths are maintained by dredging.

The harbor, formed by the lower portion of the river, is divided into Lower Harbour and Upper Harbour by a passage, 21m wide, which is spanned by a swing bridge. Lower Harbour, which dries over its greater part, has a channel leading through it from the inner piers to the Upper Harbour. This channel is 27m wide and has a depth of 1m.

The main facilities include Fish Quay, in the Lower Harbour, which is 213m long and has dredged depths up to 2.4m alongside, and Endeavour Wharf, in the Upper Harbour, which is 172m long and has depths alongside of 2.5m at LWS and 6.7m at HWS. Vessels up to 85m in length and 14m beam have been accommodated. Vessels are generally limited to drafts of between 4.5m and 6m, depending on the tide.

**Aspect.**—Conspicuous landmarks include a castle, with a flagstaff, standing 1.2 miles WSW of the entrance; a large hotel building standing above the cliff at the W side of the entrance; the ruins of an abbey standing above the cliff at the E side of the entrance; a framework television mast, 109m high, standing close ENE of the abbey; and the tower of a church standing close WNW of the abbey.

A prominent disused light tower, 22m high, stands on the inner head of the W pier. A fairway lighted buoy is moored about



0.7 mile N of the harbor entrance and vessels should pass close NNE of it. Leading marks and lighted range beacons indicate the approach and entrance channels.

**Pilotage.**—Pilotage is compulsory for fishing vessels over 45.5m in length and all other vessels over 37m in length. It is recommended for all vessels without local knowledge. Pilots can be contacted by VHF and board within 0.8 mile of the entrance. A green light is shown from the top of the disused light tower standing on the W inner pier head when a piloted vessel is entering at night.

**Anchorage.**—Vessels may anchor, in a depth of 13m, within the roadstead, about 0.7 mile NNW of the entrance.

**Caution.**—A spoil ground area, which may best be seen on the chart, lies 1 mile NNE of the harbor entrance.

No attempt to enter should be made in gales from between the N and NE as the sea breaks a long way offshore and renders the approach dangerous.

**2.26 Saltwick Nab** (54°29'N., 0°35'W.), 19m high, is a dark but conspicuous promontory located 0.8 mile ESE of Whitby harbor entrance. The coast between this promontory and Scarborough, 14.5 miles SSE, is cliffy and fringed by rocky ledges which extend up to about 0.3 mile offshore in places. For the first 2.7 miles to North Cheek, the N entrance point of Robin Hood's Bay, the coast consists of dark-colored cliffs, occasionally tinged with red. To the S of this bay the high cliffs continue, but gradually decrease in height towards Scarborough.

**Whitby High Light** (54°29'N., 0°34'W.), a main light, is shown from a conspicuous tower with dwellings, 13m high, standing on the N slope of Ling Hill, 1.7 miles SE of Whitby harbor entrance.



**Whitby High Light**

**Robin Hood's Bay** (54°26'N., 0°30'W.) is entered between North Cheek and South Cheek, 2.5 miles SSE. The shore is divided between cliff and grassy banks, broken in places by deep gullies. It is backed by ground, which rises like an amphitheater, and fronted by rocky ledges extending up to 0.5 mile seaward. Ravenscar, a village, is situated near South Cheek and is conspicuous from seaward. A conspicuous radio mast stands close S of the village.

**Caution.**—Numerous wrecks, some dangerous, lie within 3 miles of the shore along this stretch of coast and may best be seen on the chart.

**2.27 Scarborough** (54°17'N., 0°24'W.) ([World Port Index No. 31690](#)) stands at the head of Scarborough Bay, 9 miles SSE of Robin Hood's Bay and is approached between Scarborough Rock, a headland, and White Nab, a cliffy point, 1.4 miles S. It is a small commercial port, a fishing center, and a yachting center.

**Tides—Currents.**—Tides rise about 5.7m at springs and 4.7m at neaps.

In the bay, the tidal currents are barely perceptible, but off the E pier, the N current runs with some strength from 1 hour before HW to 2 hours after LW.

**Depths—Limitations.**—The bay is fronted by rocky ledges which dry. It has depths of 9m, decreasing to 1.8m about 0.2 mile offshore.

The harbor is formed by four piers which act as breakwaters and divide it into two sections, Old Harbour and East Harbour.

East Harbour, located between East Pier and Old Pier, dries and is used as a yacht haven. Vincent Pier is located close to the head of Old Pier and connected to it by a drawbridge. The regular entrance to East Harbour is 8m wide and lies between the heads of Vincent Pier and East Pier. During winter months, a boom is placed across this entrance and access is then only possible through an entrance, 9m wide, at the site of the drawbridge.

Old Harbour, located between Old Pier and West Pier, dries and has an entrance 29m wide. The wharf on the inner side of West Pier is used by fishing vessels and the wharf and pier on the N side of the harbor are used by coasters. There are depths in the channel, which is 10m wide and leads to the berths, of 5m at springs and 3.8m at neaps. Vessels up to 2,400 dwt and 79m in length can enter with drafts up to 4.6m at HWS and up to 3.7m at HWN.

Vessels using the harbors should be capable of taking the bottom at LW.

**Aspect.**—Scarborough Rock, 85m high, is a headland which forms the N entrance point of the bay. The ruined keep of a castle stands on this headland and is one of the most striking objects along this coast. Also conspicuous from seaward is the war monument standing on Oliver Mount, 1.5 miles SSW of the headland.

Prominent marks within the town include a chimney, the tower of a church, and several hotel buildings.

A main light is shown from a prominent tower, 15m high, standing on Vincent Pier.

The harbor is formed by four piers which act as breakwaters and divide it into two sections, Old Harbor and East Harbor.



**Scarborough Rock**

**Pilotage.**—Pilotage is compulsory for vessels over 37m in length and fishing vessels over 45.5m in length. It is recom-



**Scarborough Light (Vincent Pier)**

mended for all vessels without local knowledge. Pilots can be contacted by VHF and board about 1 mile E of the entrance.

**Signals.**—Tidal signals are shown when there is a depth of more than 1.8m in the entrance, as follows:

1. A fixed yellow light from Vincent Pier Light.
2. Two fixed red lights from West Pier.
3. Two fixed green lights from the SW corner and the drawbridge at Vincent Pier.

When there is a depth of more than 3.7m, a black ball is displayed, by day, and a white isophase light shown, at night, from Vincent Pier Light.

**Anchorage.**—Vessels can anchor, in a depth of 8m, sand over blue clay, good holding ground, about 0.5 mile E of the harbor entrance.

**Caution.**—Both harbor sections experience silting.

Several spoil ground areas lie in the approach to the harbor and may be best seen on the chart.

Several wrecks, some dangerous, lie in the approach to the harbor and may best be seen on the chart.

When heavy swells are running from the N or E, vessels should not navigate close to the East Pier or Scarborough Rock. Strong winds from the NNW also send a heavy sea into

the bay. Vessels should enter the harbor between half flood and first quarter ebb.

**2.28 Filey Brigg** (54°13'N., 0°16'W.), located 6 miles SE of Scarborough Bay, is a chain of rocky ledges which extends up to about 0.5 mile ESE from a point on the coast. A shallow shoal fronts the chain and is marked by a lighted buoy.

The coast between Scarborough and this chain is cliffy and fronted in most places by foul ground extending up to 0.5 mile offshore.

**Filey Bay** (54°12'N., 0°15'W.) lies between Filey Brigg and King and Queen Rocks, 3.5 miles SSE. It affords shelter from the N and offshore winds, but is shallow and may only be used by small vessels. The shore of the bay is cliffy and backed by a grassy bank.

Filey, a small resort town, stands on the top of a bank at the NW end of the bay. A church, with a tower, stands in the N part of the town and is conspicuous. Small vessels can anchor, in a depth of 5m, clay covered with sand, about 0.7 mile E of the town.

Conspicuous radio masts stand 3 miles S, 5 miles WSW, and 4.5 miles SSW of Filey.

The coast between King and Queen Rocks and Flamborough Head, 6 miles SE, consists of precipitous cliffs which are only broken at a small inlet, located 1.2 miles NW of the headland.

**Flamborough Head** (54°07'N., 0°05'W.), from which a main light is shown, [is described in paragraph 3.2](#).

**Caution.**—An area centered about 1.2 miles NW of Flamborough Head and lying adjacent to the coast has not been surveyed.

Several submarine cables extend seaward from the vicinity of Filey Bay and may be best seen on the chart.

Within about 1.5 miles of the coast, the main light shown from Flamborough Head is obscured up to 8 miles N by the cliffs.

Numerous wrecks, some dangerous, lie up to 4 miles offshore along this stretch of coast and may best be seen on the chart.